



2017

NPDES STORMWATER MANAGEMENT PROGRAM PLAN

Prepared March 2017



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Public Comment.

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CITY OF KIRKLAND

2017 STORMWATER MANAGEMENT PROGRAM PLAN

Prepared January, 2017

1. Introduction

1.1 The Purpose of the Stormwater Management Program Plan

This document constitutes the City of Kirkland 2017 Stormwater Management Program (SWMP) Plan as required under condition S5.A2 of the Western Washington Phase II Municipal Stormwater Permit (the Permit). The purpose of the document is to detail actions that the City of Kirkland proposes to take between January 1, 2017 and December 31, 2017 to maintain compliance with conditions in the Permit.

1.2 The NPDES Program

The National Pollutant Discharge Elimination System (NPDES) is a program created under the Federal Clean Water Act with the intent of protecting and restoring water quality in lakes and streams so they can support “beneficial uses” such as fishing and swimming. Governmental and private entities wishing to discharge water or wastewater to surface waters regulated by the Federal Government (Waters of the US) must obtain permits and comply with certain conditions or face fines and other penalties. NPDES permits have been written for discharges from construction sites, concentrated animal feeding operations, industrial activities, publicly-owned wastewater treatment plants, and municipal stormwater systems.

In Washington State, the US Environmental Protection Agency has delegated the authority over NPDES permits to the Washington State Department of Ecology (Ecology). Ecology has issued several general permits for discharges from stormwater systems that apply to municipalities with different sizes of populations and are located in different regions of the State (Eastern and Western Washington). Phase I refers to municipalities of >100,000, and Phase II to those with a population of less than 100,000 according to the 1990 census.

1.3 The Western Washington Phase II Municipal Stormwater Permit

Kirkland has been identified as a municipal Stormwater permittee and therefore must establish a stormwater program that complies with conditions in the Western Washington Phase II Municipal Stormwater Permit. The Permit allows municipalities to discharge stormwater from municipal systems into “waters of the state” such as rivers, lakes, streams, and ground water as long as we implement programs to reduce pollutants in stormwater to the “maximum extent practicable” by conducting programs and activities in the following program areas:

- » Public Education and Outreach
- » Public Involvement and Participation
- » Illicit Discharge Detection and Elimination
- » Controlling Runoff from New Development, Redevelopment, and Construction Sites
- » Pollution Prevention and Municipal Operations and Maintenance
- » Monitoring

Table 1: Stormwater Management Program Implementation Timeline

Permit Section	Requirements	Deadline	2013				2014				2015				2016				2017				2018			
			Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4		
S5.A.	Stormwater Management Program (SWMP) Plan																									
	Update SWMP Plan Annually	March 31st																								
S5.C.1.	Continue to track SWMP costs	ongoing																								
	Public Education and Outreach																									
	Continue education and outreach program	ongoing																								
	Create or partner with existing organizations to create stewardship.	2014				X																				
	Use resulting measurements to make changes to improve program.	2/2/2016														X										
	Public Involvement																									
S5.C.2.	Public participation in SWMP development; post annual report and SWMP on COK website (May 31.st)	ongoing																								
S5.C.3.	Illicit Discharge Detection and Elimination (IDDE)																									
	Continue implementing the enforceable mechanism to prohibit illicit discharges, update ordinance if needed.	2/2/2018																								
	Continue municipal staff training, IDDE response, and citizen hotline.	ongoing																								
	Respond to spills and illicit connections into the MS4	ongoing																								
S5.C.4.	Control Runoff from new Development, Redevelopment, and Construction Sites																									
	Continue program addressing construction and post construction runoff controls.	ongoing																								
	Continue plan review, inspection, and enforcement of standards for new and redevelopment.	ongoing																								
	Adopt and implement revised stormwater codes.	12/31/2016																								
	Implement development code revisions to reduce impervious surface, protect vegetation, and minimize stormwater runoff.	12/31/2016																								
S5.C.5.	Municipal Pollution Prevention, Operation & Maintenance																									
	Continue to annually inspect all municipal SW treatment and flow control BMPs/facilities.	ongoing																								
	Update maintenance standards to meet the new adopted SW Manual.	12/31/2016																								
S8.	Monitoring																									
S8.A.	Continue Kirikland specific stormwater monitoring and related studies.																									
S8.B.	Participate in Regional Status and Trends monitoring.	ongoing						X																		
S8.C.	Participate in Regional Effectiveness monitoring.	ongoing						X																		
S8.D.	Participate in Regional Source ID and Diagnostic monitoring.	ongoing						X																		
S9.	Reporting																									
	Submit 2014 Annual Report	3/31/2015											X													
	Submit 2015 Annual Report	3/31/2016														X										
	Submit 2016 Annual Report	3/31/2017																								
	Submit 2017 Annual Report	3/31/2018																								

1.3 The Western Washington Phase II Municipal Stormwater Permit (Continued)

The SWMP Plan must be prepared and submitted annually and must contain the planned actions and activities that will be used in the current year to maintain compliance with the Permit. In addition, the Permit requires the City to submit an Annual Compliance Report by March 31st of each year that details actions taken in the previous year to achieve compliance. The full text of the Permit can be viewed at: <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/phasellww/wwphiipermit.html>

1.4 Permit History and Implementation

The original Permit was valid for 5 years, from February 17, 2007 to February 15, 2012, and allowed for phased implementation of stormwater management programs and actions. In 2012, Ecology reissued this Permit and extended the schedule to July 31, 2013 with no new permit conditions.

The current Permit was issued on August 1, 2012, and is effective between August 1, 2013 and July 31, 2018. It requires continued compliance with the substantial conditions of the previous Permit. It also allows for phased implementation of new requirements over the five year permit cycle. Table 1 provides an overall schedule timeline including implementation due dates. Kirkland continues to be in position to meet deadlines and maintain full Permit compliance.

1.5 Current and Planned Activities

The SWMP Plan is a set of actions and activities comprising the components listed in the Permit and actions necessary for permit compliance. The Plan is organized to address the program components noted in Condition 55C of the Permit.

The following sections of the SWMP Plan describe requirements in the Permit, followed by the current and planned activities to meet each permit component. The subsection of Permit Condition 55C associated with each section is noted in parentheses in the section on Permit Requirements.

1.6 City Coordination and Responsibilities

Compliance with the Permit requires coordination and documentation of activities in several City departments. The Public Works Department Surface Water Utility staff will coordinate City efforts, and will meet with staff from other departments regularly to insure that current and planned activities meet Permit requirements. Activities required for Permit compliance will be carried out by the Public Works, Information Technology, Planning and Community Development, Parks, City Manager's Office (City Attorney), Finance, Fire and Building, and Police departments.

1.7 The Surface Water Management Utility – Other Activities

This SWMP Plan details actions and activities that fall under the purview of the Permit. Stormwater management is one part of the City's overall surface water management strategy.

The Surface Water Utility conducts a suite of related programs that reduce flooding, protect and improve water quality, and protect and restore aquatic habitat in the City's streams and lakes. Although not directly required, flood reduction and aquatic habitat restoration efforts can often further stormwater management goals.

Kirkland's Surface Water Master Plan was updated in 2014. The Master Plan sets priorities and recommends project programs and rates to support the utility over the next 5-10 years. The update included extensive public involvement in the form of open houses, mailings, and web information.

For details on Surface Water Utility activities not addressed in this SWMP, contact the Public Works Department at (425) 587-3800, or visit the [City website here](#).

2. Public Education and Outreach

2.1 Permit Requirements

The Permit (Section S5C.1) requires implementation of a stormwater education and outreach program designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts and encourage the public to participate in stewardship activities. The program is designed to:

- » Educate target audiences about the stormwater problem and provide specific actions they can follow to minimize the problem.
- » Build general awareness for the public, including: school age children, businesses, engineers, contractors, developers, land use planners, residents, landscapers, and property owners/managers.
- » Create stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings and education activities.
- » Measure the understanding and adoption of behaviors by specific target audiences, and use that information to evaluate past programs and direct future programs.
- » Track and maintain records of public education and outreach activities, and summarize these activities in the Annual Compliance Report.

2.2 Current City Activities

Kirkland has activities and programs meeting the Permit requirements. Kirkland tracks education and outreach efforts, and evaluates costs vs. benefits. Kirkland will continue to refine the public education and outreach program, and will summarize the annual activities in the Annual Compliance Report.

Kirkland has also been an active participant in the STORM (Stormwater Outreach for Regional Municipalities) Group to help implement education and outreach programs regionally and to identify appropriate program evaluation techniques.

Table 2.1 lists significant programs, target audiences, and behaviors promoted by the Kirkland education and outreach program.

Table 2.1 Current Education and Outreach Programs and Activities

Program	Target Audience	Goal and/or Behaviors Promoted
Newsletters, newspaper inserts, Twitter, Facebook, blog	General public, homeowners, residents	Increase awareness of stormwater impacts on surface waters.
School workshops program (K-12)	General public, including school age children	Increase awareness of stormwater impacts on surface waters.
Booths and displays at various special and on-going events	General public, including school age children	Increase awareness of stormwater impacts on surface waters, and opportunities to become involved in stewardship activities.
Storm Drain Marking	General public	Increase awareness of stormwater impacts on surface waters, and prevention of illicit discharges.
STORM (Stormwater Outreach for Regional Municipalities)	General public, businesses	Increase awareness of stormwater impacts on surface waters, and opportunities to become involved in stewardship activities, use and storage of hazardous chemicals, and pet waste management.
Residential Stormwater Audit Program	Homeowners	Increase awareness of stormwater impacts on surface waters, management of stormwater flow and volume.
Car Wash Monitoring and Outreach	Businesses, general public, including school age children	Prevention of illicit discharges, proper techniques for discharge of washwater to sanitary sewer.

Table 2.1 Current Education and Outreach Programs and Activities (continued)

Hazardous Waste Management and Reduction	Businesses	Use and storage of chemicals, cleaning supplies, and other hazardous materials. Reduction in creation of hazardous waste, proper disposal, and prevention of illicit discharges.
Local Source Control Technical Assistance	Businesses	Work with businesses to develop practical methods for proper use and storage of automotive chemicals, cleaning supplies, other hazardous materials, equipment maintenance, and prevention of illicit discharges.
Developers Forum	Engineers, contractors, developers, review staff, land use planners	Increase awareness of technical standards for stormwater site and erosion control plans, LID principles and techniques, and stormwater treatment and flow control BMPs/facilities.
Natural Yard Care Program	Homeowners, residents	Yard care techniques protective of water quality; proper use and storage of pesticides, fertilizers and other household chemicals.
Cascade Gardener Classes	General public	Yard care techniques protective of water quality; proper use and storage of pesticides, fertilizers and other household chemicals.
Pet Waste Outreach	General public, dog owners and dog walkers	Proper management and disposal of pet waste.
Totem Lake YardSmart Pilot Program	Homeowners	Increase awareness of stormwater system location; implement LID techniques to reduce stormwater impacts to downstream waterbodies.
Private Drainage System Inspections and Technical Assistance Program	Businesses, property managers	Increase awareness of stormwater impacts on surface waters, proper stormwater facility maintenance, dumpster and trash compactor maintenance, and prevention of illicit discharges.
Adopt a Storm Drain Program	General public	Increase awareness of stormwater impacts from impervious surfaces.
Green Building Program	Engineers, contractors, developers, review staff, land use planners	Increase awareness of technical standards for stormwater site and erosion control plans, LID principles and techniques, and stormwater treatment and flow control BMPs/facilities.
Puget Sound Starts Here	General public	Increase awareness of stormwater impacts from impervious surfaces, and impacts of illicit discharges and how to report them.
BMP information cards	Various	Increase awareness of Stormwater system location; identify behaviors to prevent Stormwater pollution.

2.3 Planned City Activities

Kirkland has a Public Education and Outreach program, but will continually update existing efforts in order to maintain compliance as the new requirements are phased in over the 5-year Permit term (2013-2018).

Table 2.2 is the work plan for the 2017 SWMP Public Education and Outreach activities. These tasks were developed through meetings with staff from affected City departments.

Table 2.2 Education and Outreach Work Plan for 2017

Item ID	Item Title	Additional Departments Involved	Schedule Notes
EDUC-1	Continue to refine and implement Public E&O activities and programs as the new Permit's requirements are implemented. Identify / interact with new audiences.	Information Technology, Parks, City Managers Office	On-going
EDUC-2	Create stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings and education activities.	Information Technology, Parks, City Managers Office	On-going
EDUC-3	Continue to implement YardSmart Rain Rewards Pilot Program.	None	On-going
EDUC-4	Use the resulting measured information to make changes and improve outreach program (Natural Yard Care Neighbors Program).	None	On-going. To be completed by August 1, 2017.
EDUC-5	Summarize annual activities for "Public Education and Outreach" portion of Annual Compliance Report.	None	Begin in 2017. To be completed by March 31, 2018.

3. Public Involvement and Participation

3.1 Permit Requirements

The Permit (Section S5C.2) requires the City to provide ongoing opportunities for public involvement and participation through advisory councils, public hearings, watershed committees, participation in developing rate-structures or other similar activities. The SWMP Plan includes:

- » An opportunity for the public to participate in the decision-making processes involving the development, implementation and update of the SWMP.
- » Make the SWMP Plan and Annual Compliance Report available to the public upon request, and post on the City's website.
- » Track and maintain activities for public involvement and participation, and summarize these activities for the Annual Compliance Report.

3.2 Current City Activities

Kirkland currently implements activities and programs meeting the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-2018 Permit are implemented. Current compliance activities associated with the above Permit requirements include:

- » Posting of the draft NPDES SWMP Plan on the City's website along with an invitation to the public to submit comments on the document.
- » Hosting numerous public hearings, trainings, and open houses to gather input on Stormwater site development requirements and Low Impact Development programs and requirements to be implemented beginning January 1, 2017.
- » Kirkland makes the final NPDES SWMP Plan and Annual Compliance Reports available to the public on the City's website.

3.3 Planned City Activities

Activities planned for continued compliance are shown in the Table 3.1.

Table 3.1 Public Involvement Work Plan for 2017

Item ID	Item Title	Additional Departments Involved	Schedule Notes
PUB-1	Conduct public involvement process for 2017 Stormwater Management Program Plan, including posting of Draft Plan on City website.	City Manager's Office	To be completed by March 15, 2017.
PUB-2	Post Final 2017 Stormwater Management Program Plan on City website.	Information Technology	To be completed by May 31, 2017.
PUB-3	Refine public involvement process for overall stormwater management program.	City Manager's Office	On-going
PUB-4	Summarize annual activities for "Public Education and Outreach" portion of Annual Compliance Report.	None	Begin in 2017. To be completed by March 31, 2017.

4. Illicit Discharge Detection and Elimination

4.1 Permit Requirements

The Permit (Section 55C.3) requires the City to have an ongoing program designed to prevent, detect, characterize, trace and eliminate illicit connections and illicit discharges into the municipal stormwater system. The program includes:

- » Continue mapping the municipal stormwater system, including attributes of stormwater system outfalls, discharge points, receiving waters (other than groundwater), stormwater treatment and flow control BMPs/facilities owned and operated by the City, and tributary conveyances to all known outfalls and discharge points (24 inch diameter or larger).
- » Implement an ordinance to effectively prohibit non-stormwater discharges and dumping into the stormwater system.
- » Implement a compliance strategy that includes informal compliance actions such as public education and technical assistance as well as the enforcement provisions of the ordinance.
- » Implement a field-screening program to identify non-stormwater discharges and illicit connections to the municipal stormwater system.
- » Publicly list and publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges. Track reports of discharges and actions taken to address the reported problem.
- » Provide training for municipal field staff on the identification, reporting, and response to illicit discharges into the stormwater system. Provide follow up training as needed to provide changes in procedures, techniques, requirements, or staffing.
- » Implement program to address illicit discharges and connections to the municipal Stormwater system, including characterization, source tracing, response and elimination.
- » Adopt and implement procedures for program evaluation and assessment.
- » Inform public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste.
- » Track and maintain records of IDDE program activities, and summarize these activities in the Annual Compliance Report.

4.2 Current City Activities

Kirkland currently implements activities and programs meeting the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-2018 Permit are implemented. Current compliance activities associated with the above Permit requirements include:

- » Continue Kirkland's ongoing program designed to prevent, detect, characterize, trace and eliminate illicit connections and illicit discharges into the municipal stormwater system.
- » Kirkland has maps and an associated GIS database for the municipal and private stormwater systems. Standard procedures are in place for maintaining the GIS database to document new connections, changes/alterations to the existing system, and changes based on field verification. Drainage areas and land use have been used to identify outfalls 24" or greater in size. Maps are available to Ecology and to co-permittees and secondary permittees upon request in electronic format.
- » Kirkland Municipal Code Chapter 15.52 prohibiting illicit discharges to the stormwater system was updated in 2016 to reflect refined permit requirements.
- » Kirkland has an on-going informal compliance strategy, and strives to achieve compliance through public education and technical assistance. Kirkland Municipal Code Chapter 1.12 was updated in 2016 to support this program. When education, technical assistance, and voluntary correction agreements do not achieve compliance, Kirkland Municipal Code Chapters 1.12 and 15.52 provides for progressive enforcement actions and penalties.
- » A phone number 425-587-3900 is publicly listed for reporting of spills and other illicit discharges and is publicized as a reporting hotline. Records are kept of calls received, and actions taken as a result of these calls.

- » Kirkland has a training program for city staff on the identification, reporting, and response to illicit discharges into the stormwater system. The program includes periodic updates to account for changes to procedures, techniques, requirements, and new staff.
- » Kirkland has programs to educate public employees, businesses, and the general public about illicit discharges and the hazards associated with improper disposal of waste through King County Local Hazardous Waste Management Program, source control visits to businesses by City staff, and general awareness campaigns. Public feedback is tracked and compiled each year.

4.3 Planned City Activities

Activities planned for continued Permit compliance are shown in Table 4.1.

Table 4.1 Illicit Discharge Detection and Elimination Work Plan for 2017

Item ID	Item	Additional Departments Involved	Schedule Notes
IDDE-1	Update maps and GIS database for the municipal stormwater system to indicate new connections.	Information Technology	On-going
IDDE-2	Continue to implement and refine the IDDE field screening methodology for identification of potential sources of non-stormwater discharges and illicit connections. Field screen at least 40% of the municipal stormwater system, then 12% each year thereafter.	None	On-going. Minimum 40% field screen was completed by December 31, 2015. Minimum 12% to be field screened each year thereafter.
IDDE-3	Continue training City field staff on the identification, reporting, and response to illicit discharges into the stormwater system.	Police, Parks, Fire & Building, Planning and Community Development	On-going
IDDE-4	Continue to implement and refine program to address illicit discharges and connections, including characterization, source tracing, response and elimination.	None	On-going
IDDE-5	Continue to implement and refine progressive compliance strategy in support of ordinance to prohibit non-stormwater discharges to storm system.	Planning and Community Development	On-going
IDDE-6	Continue program to educate businesses and the general public about the hazards associated with improper disposal of waste.	None	On-going
IDDE-7	Summarize annual activities for "Illicit Discharge Detection and Elimination" portion of Annual Compliance Report.	None	Begin in 2017. To be completed by March 31, 2018.

5. Controlling Runoff from New Development, Redevelopment and Construction Sites

5.1 Permit Requirements

The Permit (Section 55C.4) requires Kirkland implement and enforce a program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site activities. The program applies to private and public development, including roads. This program includes the following activities:

- » Implement and enforce an ordinance that addresses runoff from new development, redevelopment and construction sites.
- » Adopt minimum stormwater design standards that are equivalent to the minimum technical requirements in Appendix 1 of the Permit.
- » Implement a program (permitting process) to review plans, inspect sites during construction, and to take enforcement action against those failing to follow approved guidelines or to provide facilities as required during plan review.
- » Adopt and implement an ordinance, maintenance standards, inspection procedures, and enforcement provisions to verify long-term operation and maintenance of permanent stormwater control facilities constructed after the effective date of the Permit.
- » Provide copies of the “Notice of Intent for Construction Activity” and “Notice of Intent for Industrial Activity” to representative of proposed new development and redevelopment.
- » Review, revise, and implement development codes and standards to incorporate and require Low Impact Development (LID) construction techniques, no later than December 31, 2016.
- » Provide training for staff on new/revised regulations, standards, processes and procedures.
- » Provide training and outreach to the public including engineers and developers on the new codes, processes and procedures.
- » Track and maintain records of activities associated with the regulation of new development, redevelopment, and construction sites, and summarize these activities in the Annual Compliance Report.

5.2 Current City Activities

Kirkland currently implements activities and programs meeting the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-2018 Permit are implemented. Current compliance activities associated with the above Permit requirements include:

- » Kirkland Municipal Code Chapter 15.52 addresses runoff from new development, redevelopment and construction sites.
- » Kirkland adopted the 2016 King County Surface Water Design Manual effective January 1, 2017. These stormwater design standards are equivalent to the minimum technical requirements in Appendix 1 of the current Permit.
- » Kirkland has a program (permitting process) to review plans, inspect sites during construction, and to take enforcement action against those failing to follow approved guidelines or to provide facilities as required during plan review.
- » Kirkland maintains records of inspections, maintenance standards, and enforcement actions by staff to verify long-term operation and maintenance of permanent stormwater control facilities.
- » Kirkland provides copies of the “Notice of Intent for Construction Activity” and “Notice of Intent for Industrial Activity” to the applicants as part of the development permit process.
- » In 2016, Kirkland amended development codes and standards to make Low Impact Development (LID) techniques the “preferred and commonly used approach to development” effective January 1, 2017.

- » Staff continues to increase their knowledge by remaining current with new/revised stormwater regulations, along with attending trainings on erosion control, LID techniques, stormwater design models, standards, and practices.
- » Through the Developer's Forum and associated listserv, Kirkland provides the development community and the public with information and updates on proposed changes to stormwater design requirements, codes, processes and procedures.

5.3 Planned City Activities

Activities planned for continued Permit compliance are shown in Table 5.1.

Table 5.1 Controlling Runoff from New Development, Redevelopment and Construction Sites Work Plan for 2017

Item ID	Item Title	Additional Departments Involved	Schedule Notes
CTRL-1	Continue to provide copies of the Notice of Intent for Construction Activity and Notice of Intent for Industrial Activity to the applicants for development permits.	None	On-going
CTRL-2	Provide training tools and resources to support implementation of the 2016 King County Surface Water Design Manual and City of Kirkland Addendum for site development applications.	Planning and Community Development	On-going.
CTRL-3	Implement development code and standards revisions to reduce impervious surface, protect native vegetation, and minimize stormwater runoff.	Planning and Community Development, Fire & Building	On-going.
CTRL-4	Continue to provide training for staff and the development community to increase their knowledge in stormwater regulation, design, and construction.	None	On-going
CTRL-5	Implement and refine program to provide training and outreach to the public (including engineers and developers) on the new codes, processes and procedures.	Information Technology	On-going.
CTRL-6	Continue to refine and implement program for Controlling Runoff from New Development, Redevelopment and Construction Sites.	None	On-going
CTRL-7	Summarize annual activities for "Controlling Runoff from New Development, Redevelopment and Construction Sites" portion of Annual Compliance Report.	None	Begin in 2017. To be completed by March 31, 2018.

6. Municipal Operations and Maintenance

6.1 Permit Requirements

The Permit (Section 55C.5) requires the City to implement an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program is required to:

- » Implement maintenance standards that are as protective as those noted in the *2012 Stormwater Management Manual for Western Washington* no later than December 31, 2016.
- » Perform inspections of municipally owned and operated water quality treatment and flow control facilities and catch-basins at the frequencies required in the Permit.
- » Implement practices, policies and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by Kirkland and road maintenance activities.
- » Implement training program for staff addressing the importance of protecting water quality during maintenance operations.
- » Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage yards, and material storage facilities owned or operated by the City.
- » Track and maintain records of inspections, maintenance and repair activities, and summarize these activities in the Annual Compliance Report.

6.2 Current City Activities

Kirkland currently implements activities and programs meeting the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-2018 Permit are implemented. Current compliance activities associated with the above Permit requirements include:

- » The City Operations and Maintenance (O&M) Program takes steps to minimize pollutants in runoff from City activities as noted in the ESA Regional Road Maintenance Program Guidelines, which are being used although not formally adopted.
- » Municipally owned and operated water quality treatment and flow control facilities and catch-basins are inspected, cleaned and repaired at the frequency required in the Permit, per maintenance standards established in the 2012 Stormwater Management Manual for Western Washington.
- » The City O&M Program implements practices, policies and procedures to reduce stormwater impacts associated with runoff from land owned or maintained by Kirkland and road maintenance activities. In addition, both Parks and Public Works Departments use Integrated Pest Management and other techniques to minimize pollutant discharge from landscaped areas on City property.
- » O&M staff receives training on the importance of protecting water quality during maintenance operations.
- » A SWPPP for City Maintenance Facilities that qualify as heavy equipment/material maintenance or storage yards was updated in 2016 and is being implemented and updated as needed.

6.3 Planned City Activities

Activities planned for continued Permit compliance are shown in Table 6.1.

Table 6.1 Municipal Operations and Maintenance Work Plan for 2017

Item ID	Item Title	Additional Departments Involved	Schedule Notes
MUNI-1	Implement maintenance standards equivalent to the 2012 Stormwater Management Manual for Western WA.	None	On-going.
MUNI-2	Continue to implement and refine the O&M Program to meet permit requirements. Annually inspect all municipal stormwater treatment and flow control facilities/BMPs. Inspect all municipal stormwater catch basins and inlets.	Information Technology	On-going. New requirements to be completed by August 1, 2017.
MUNI-3	Continue to provide training to O&M staff regarding pollutant reduction from runoff during maintenance activities.	Parks	On-going
MUNI-4	Continue to implement and update the SWPPP for qualifying City Maintenance yards/facilities.	None	On-going
MUNI-5	Continue to refine and implement Municipal O&M activities and programs.	Facilities, Parks	On-going
MUNI-6	Summarize annual activities for "Municipal Operations and Maintenance" portion of Annual report.	None	Begin in 2017. To be completed by March 31, 2018.

7. Monitoring

7.1 Permit Requirements

The Permit (Section S8) requires the City to:

- » Include a description of any stormwater monitoring or stormwater-related studies in the Annual Compliance Report.
- » Participate in the Regional Stormwater Monitoring Program (RSMP) for Status and Trends or implement an individual monitoring program.
- » Participate in the RSMP for Effectiveness Studies or implement an individual monitoring program.
- » Participate in the RSMP for Source Identification Information Repository.
- » Track and maintain records of monitoring activities, and summarize these activities in the Annual Compliance Report.

7.2 Current City Activities

Kirkland currently implements activities and programs meeting the Permit requirements. The City will continue to implement these programs and activities as new and/or increased requirements in the 2013-2018 Permit are implemented. Current compliance activities associated with the above Permit requirements include:

- » Kirkland participated in a variety of regional and state monitoring forums to develop feasible and effective monitoring requirements for the new Permit. As a result of this work, Ecology included a regional stormwater monitoring option in the new Permit.
- » Kirkland conducts bacteria sampling in Juanita creek and aquatic macroinvertebrate (bug) sampling in several creeks to evaluate stream health. While not required under the permit, these activities complement and inform other permit activities.
- » Kirkland reports potential water quality violations to Ecology within 30 days of becoming aware of the potential violations per the Permit's Compliance with Standards condition S4F.

7.3 Planned City Activities

Activities planned for continued Permit compliance are shown in Table 7.1.

Table 7.1 Monitoring Work Plan for 2017

Item ID	Item Title	Additional Departments Involved	Schedule Notes
MNTR-1	Participate in the Regional Stormwater Monitoring Programs (RSMP) for Status and Trends, Effectiveness Studies, and Source Identification and Diagnostic.	None	On-going
MNTR-2	Submit payments to Ecology to fund the RSMP. Payments will occur annually for four years of the Permit cycle (2014-2017).	None	Fourth payment due August 15, 2017
MNTR-3	Participate in regional and state monitoring forums and future legislative actions as needed to ensure scientifically sound analysis and appropriate use of monitoring data in stormwater management and future Permits.	None	On-going
MNTR-4	Continue to implement and refine additional monitoring activities and programs.	None	On-going
MNTR-5	Summarize annual activities for "Monitoring" portion of Annual Compliance Report.	None	Begin in 2017. To be completed by March 31, 2018

Appendix A

Public Comment:

From: Jim Boril [<mailto:JimBoril@live.com>]
Sent: Saturday, February 18, 2017 2:15 PM
To: Stormwater <Stormwater@kirklandwa.gov>
Subject: Stormwater Management Program Plan

In the plan, I see that you have city departments listed as needing to cut back on pollutants into our creeks. However, one of the worst offenders in my opinion is our garbage collection company. Some of their trucks drip continuously as they go through our neighborhoods. On a rainy garbage pickup day I hate walking my dogs on the street because they are constantly stepping in oil. I find it ironic that you prevent citizens from washing their cars in their driveways while allowing the garbage company to regularly pollute the streets.

Thanks,

Jim Boril
North Juanita

From: Mark Plesko [<mailto:plesko@outlook.com>]
Sent: Wednesday, March 01, 2017 4:52 PM
To: Stormwater <Stormwater@kirklandwa.gov>
Subject: Feedback on 2017 Stormwater Management Program Plan

Hi,

I have some feedback on the plan. For the areas of development and transportation, I see a lot of mitigation of existing practices. I'd like to recommend that the Stormwater Plan also address the core causes and work with other parts of the city. Here are some examples:

- More efficient use of land for transportation: transit and bike lanes can move more people per hour than car lanes and can reduce the need for additional lanes. This aligns with the multimodal hierarchy in the transportation master plan and can reduce the overall amount of impervious surface area for transportation. Cleaner transportation options should also result in cleaner runoff from our transportation corridors.
- Narrower road lanes are safer for all users due to slower vehicle speeds, which is also a goal of the transportation master plan, and can also reduce the surface area of our roads. Many roads are at 12 feet per lane where 10 feet would be much safer (a 1/6 reduction in area). This is particularly true in residential areas where two lane roads can be 30 and sometimes even 36 feet wide. Current practice for house (re)construction seems to include widening roads, despite the effects on vehicle speeds and runoff.
- Current zoning leads to single family construction across a very large percentage of the city. This is an efficient way to provide housing. More housing options (from duplexes to apartment buildings across the city) would align with the city's desire to be inclusive (allowing housing for a variety of incomes) as well as improving the ratio of people to roof area.

Obviously these things are not directly under the control of the Stormwater Utility. However, the Utility could provide feedback as part of other plans in the city. For example, there is a possible capital project to widen 124th Ave with another general purpose lane. I don't think it would be productive for the Utility to oppose any construction, but it could be worthwhile to promote a more efficient use of space.

Thank you,
Mark Plesko

